1. (Currently Amended): A convergence system for translating data received in an ATM format into a MAC format, the convergence system comprising:

a network connection provisioning module configured to grant or reject requests for a communication channel connection[[,]] which, upon granting a connection, selects a compression method[[,]] from a plurality of selectable compression methods, at least some of which include mapping ATM cell addressing bits into MAC packet addressing fields;

an ATM segmentation module configured to buffer data which is incoming on the granted connection and to provide portions of the data to other modules, the portions provided depending, at least in part, upon the selected compression method;

a MAC header module configured to derive a header for a MAC packet from data in one or more incoming ATM cells having a common destination in combination with connection parameters including any selected header compression methods; and

a MAC reassembly module configured to format data from the ATM segmentation module and the MAC header module into an outgoing MAC data packet having a header and a payload which represents incoming data from one or more ATM cells sharing a common destination.

2. (Currently Amended): The convergence system of claim 1 wherein for at least one of the selectable compression methods the MAC reassembly module is further configured adapted to include payload data of a plurality of ATM cells sharing a common destination in the payload of the outgoing MAC data packet and to remove any ATM header addressing data therefrom.

3. (Currently Amended): The convergence system of claim 1 wherein for at least one of the selectable compression methods the MAC reassembly module is further configured adapted to include payload data of a plurality of ATM cells sharing a

common destination in the payload of the outgoing MAC data packet and to remove all ATM header data therefrom.

4. (Currently Amended): The convergence system of claim 1 wherein for at least one of the selectable compression methods the MAC reassembly module is further ~~configured~~ adapted to include payload data of a plurality of ATM cells sharing a common destination, and to encapsulate ~~a fraction~~ at least a portion of ATM header addressing data from ~~each~~ at least one of the plurality of ATM cells in the payload of the outgoing MAC data packet.

5. (Currently Amended): The convergence system of claim 4 wherein for at least one of the selectable compression methods the MAC reassembly module is further ~~configured~~ adapted to include payload data of a plurality of ATM cells sharing a common destination and to encapsulate a virtual connection identifier from the header of each of the plurality of ATM cells along with the ATM payload data.

6. (Currently Amended): The convergence system of claim 1 wherein for at least one of the selectable compression methods the ATM segmentation module is further ~~configured~~ adapted to remove padding from an ATM trailer cell payload, and ~~subsequently~~ to provide payload data from the trailer cell to the MAC reassembly module.

7. (Currently Amended): The convergence system of claim 1 wherein for at least one of the selectable compression methods the ATM segmentation module ~~removes~~ is adapted to remove padding and ~~also~~ CPCS and SSCS bytes from an ATM trailer cell payload prior to providing payload data from the trailer cell to the MAC reassembly module.

8. (Currently Amended): The convergence system of claim 1 wherein for at least one of the selectable compression methods the ATM segmentation module ~~removes~~ is adapted to remove padding from an ATM trailer cell payload and ~~adding~~ append a padding pattern byte representative of a pattern of the padding removed prior to providing payload data from the trailer cell to the MAC reassembly module.

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9. (Currently Amended): A method for compressing and converting data packets initially in a first fixed-length packet format ~~which are being converted~~ to a second packet format ~~prior to~~ for transmission through a link, at least one of the initial data packets ~~each~~ including a header containing overhead data ~~added~~ appended by a communication system, the method comprising ~~the steps of~~:

> obtaining a plurality of incoming packets formatted in the first fixed-length format and having common header addressing data;

> preparing a second-format packet to convey payload data from the plurality of incoming packets by:

>> mapping the common addressing data into a header of the second-format packet,

>> entering payload data from the plurality of incoming packets into a payload section of the second-format packet, and

>> omitting the common addressing data from the payload of the second-format packet.

10. (Currently Amended): The method for compressing and converting data packets of claim 9 wherein the common addressing data includes ~~all~~ at least one of the first-format header addressing data.

11. (Currently Amended): The method for compressing and converting data packets of claim 9 wherein the ~~entire~~ first-format header is substantially mapped into the second-format header, and the entire first-format header is substantially omitted from the second-format payload.

12. (Currently Amended): The method for compressing and converting data packets of claim 9 wherein a ~~fraction~~ portion of the first-format header addressing data of the incoming first-format packets is not common, and ~~that fraction from each incoming packet~~ wherein said portion is encapsulated with payload data from the incoming packet to form part of a payload of the second-format packets.

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13. (Currently Amended): The method for compressing and converting data packets of claim 12 wherein the first-format packets ~~are~~ substantially comprise ATM cells, the second-format packets ~~are~~ substantially comprise MAC packets, and ~~the fraction of each ATM cell header which is encapsulated with payload data from the ATM cell is~~ said portion substantially comprises a virtual connection identifier.

14. (Currently Amended): The method for compressing and converting data packets of claim 9 wherein a ~~fraction~~ portion of the first-format header addressing data of the incoming first-format packets ~~which is~~ having said common addressing data is disposed in one place within the second-format packet.

15. (Currently Amended): The method for compressing and converting data packets of claim 14 wherein the first-format packets ~~are~~ comprise ATM cells and the second-format packets ~~are~~ comprise MAC packets.

16. (Currently Amended): The method for compressing and converting data packets of claim 9 ~~including a further step of~~ , and further comprising removing padding data from a trailer packet of the plurality of first-format packets.

17. (Currently Amended): The method for compressing and converting data packets of claim 16 wherein the first-format packets ~~are~~ comprise ATM cells, the second-format packets ~~are~~ comprise MAC packets, the trailer packet ~~is at~~ comprises an ATM trailer cell containing and end-of-message indication, and ~~including the~~ further ~~step of~~ comprising removing CPCS and SSCS bytes from the ATM trailer cell.

18. (Currently Amended): A method for compressing data packets ~~which are initially~~ in a first fixed-length packet format ~~and are being converted~~ to provide data packets in a second packet format ~~prior to~~ for transmission through a link, the initial data packets ~~each~~ including user data intended for an end user and a header containing overhead data ~~added~~ appended by a communication system which is not intended for delivery to an end user, the method comprising ~~the steps of~~:

obtaining one or more incoming packets formatted in the first fixed-length format, ~~each of~~ the incoming packets having an identical first format header comprising first-format overhead data;

preparing a second-format packet to convey data from the one or more incoming packets by

      (a) mapping the first-format header overhead data into a header of the second-format packet;

      (b) representing ~~all~~ user data from the one or more first-format packets in a payload of the second-format packet; and

      (c) omitting from the second-format payload ~~all~~ first-format header overhead data mapped into the second-format packet header of the second-format packet.

19. (Currently Amended): The method for compressing data packets of claim 18 ~~including the~~, and further ~~steps of~~ comprising:

obtaining a first-format trailer data packet having a header identical to the headers of the one or more incoming packets except for a field indicating that the trailer packet is a last packet of a block of packets having a common destination, the trailer packet including a payload having user data and overhead padding bytes;

including the user data from the trailer packet payload with payload data from the one or more first-format packets in the second-format payload, and

omitting at least some of the padding bytes from the second-format payload.

20. (Currently Amended): The method for compressing data packets of claim 19 wherein the second-format data packets ~~are~~ comprise MAC packets, the first-format data packets ~~are~~ substantially comprise ATM cells, and the trailer packet [[is]] substantially comprises an ATM trailer cell ~~which includes~~ having CPCS and SSCS bytes; and wherein

~~all~~ padding cells are omitted from the MAC packet, and the CPCS and SSCS bytes from the ATM trailer cell are omitted from the MAC packet.

21.(Cancelled).

22.(Cancelled).

23. (Currently Amended): A method for compressing data packets ~~which are~~ ~~initially in~~ from a first fixed-length packet format ~~and are being converted~~ to a second packet format prior to transmission through a link, the ~~initial~~ data packets ~~each~~ in said first fixed-length packet format including a header containing overhead data ~~added~~ appended by a communication system, the method comprising ~~the steps of~~:

determining, during setup of a particular packet block transfer, whether virtual path or virtual connection switching is ~~required~~ is to be used for the particular packet block transfer;

obtaining a plurality of incoming packets formatted in the first fixed-length format, ~~each of~~ the incoming packets having at least a poriton of information in respsective headers which is identical ~~headers~~ and constituting at least part of the particular packet block transfer;

preparing a second-format packet to convey data from the plurality of incoming packets by selecting, dependent at least in part upon the type of switching ~~required~~ to be used as established during block transfer setup; either

(a) mapping ~~all~~ header data from one of the first-format packet headers into the second-format header, ~~adding data reflective of all~~ appending data indicative of user data in the first-format packets to a payload of the second-format packet, and omitting all first-format header data from the payload of the second-format packet, or

(b) mapping a portion of header data from one of the first-format packet headers into the second-format header, omitting the mapped portion of header data from other parts of the second-format packet, and placing data ~~reflecting~~ indicative of remaining first-format header data along with payload data from each of the incoming packets into a payload section of the second-format header.

24.   (Cancelled).

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25.   (Cancelled).

26.   (Cancelled).

27.   (Currently Amended) A method comprising:

receiving data in a plurality of first-format packets comprising common header addressing data and formatted according to a first format, the first format being a fixed length format;

selecting a compression process from among a plurality of compression processes;

mapping at least some of said common addressing data to one of more fields of a second-format packet based, at least in part, on said selected compression process;

combining payload data of said first-format packets in a payload of said second-format packet based, at least in part, on said selected compression process; and

omitting redundant common addressing data from said payload of said second-format packet.

28.   (previously presented) The method of claim 27, wherein said first format comprises a fixed-length packet format and said second-format packet is formatted according to a variable length packet format.

29.   (previously presented) The method of claim 27, wherein said plurality of first-format packets comprise ATM cells.

30.   (previously presented) The method of claim 29, wherein said ATM cells comprise an ATM trailer, said ATM trailer comprises a payload comprising user data and overhead padding bytes, and further comprising:

including said user data in said payload of said second-format packet; and

omitting at least a portion of said padding from said payload of said second-format packet.

31.   (previously presented) The method of claim 29, and further comprising omitting from said payload of said second-format packet one or more of padding, CPCS bytes and/or SSCS bytes of an ATM trailer cell among said received packets.

32.   (currently amended) The method of claim 29, and further comprising:
omitting from said payload of said second-format packet padding of an ATM trailer cell among said received packets; and
including in said payload of said second-format packet a padding pattern byte representative of said omitted packet padding.

33.   (previously presented) The method of claim 27, wherein said second-format packet comprises a MAC packet, and further comprising deriving a MAC header for said MAC packet based, at least in part, on said common header addressing data.

34.   (currently amended) The method of claim 27, and further comprising[[:]]
receiving a request for a communication channel connection[[;]] , and wherein said
selecting a compression process from among a plurality of compression processes further comprises selecting said compression process upon grant of said received request; and
~~performing said mapping and said combining based, at least in part, upon said selected compression process.~~

35.   (previously presented) The method of claim 27, and further comprising including at least a portion of said common addressing data in said payload of said second-format packet.

36.   (previously presented) The method of claim 27, wherein said first-format packets comprise a first-format packet header, and further comprising:
mapping said first-format packet header to a header of said second-format packet; and
omitting said first-format packet header from said payload of said second-format packet.

37.   (previously presented) The method of claim 27, and further comprising

receiving at least some non-common addressing data in said received first-

format packets; and

encapsulating at least a portion of said non-common addressing data in said

payload of said second-format packet.

38.   (previously presented) The method of claim 27, and further comprising

disposing a portion of first-format header addressing data common to said incoming

packets in a single field of said second-format packet.

39.   (previously presented) The method of claim 27, and further comprising:

receiving at one of more directional antennas signals transmitted from one or

more subscribers;

decoding said received signals into received data having said second-packet

format; and

reformatting said received data having said second-packet format into data

having said first-packet format.

40.   (Currently Amended) ~~The method of claim 27, wherein said plurality of~~

~~first-format packets constitute at least a portion of a packet block transfer over a~~

~~communication channel, and further comprising:~~

A method comprising:

receiving data in a plurality of first-format packets of at least a portion of a packet

block transfer over a communication channel comprising common header addressing

data and formatted according to a first format, the first format being a fixed length

format;

determining whether said communication channel is provisioned for virtual path

switching or virtual connection switching for transmission of said block transfer;

combining payload data of said first-format packets in a payload of a second-

format packet;

mapping ~~all~~ header data from one of said first-format packet headers into a

header portion of said second-format packet, ~~adding~~ appending data reflective of user

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data in said first-format packets to said payload of said second-format packet, and omitting all first-format header data from the payload of the second-format packet if said communication channel is provisioned for virtual connection switching; and

mapping a portion of header data from one of said first-format packet headers into a header of said second-format packet, omitting said mapped portion of header data from other portions of said second-format packet, and placing data reflecting remaining first-format header data along with payload data from at least some of said incoming packets into said payload second of said second-format packet if said communication channel is provisioned for virtual path switching.

41.   (currently amended) A apparatus comprising:

means for receiving data in a plurality of first-format packets comprising common header addressing data and formatted according to a first format, the first format being a fixed length format;

means for selecting compression process from among a plurality of compression processes;

means for mapping at least some of said common addressing data to one of more fields of a second-format packet based, at least in part, on said selected compression process;

means for combining payload data of said first-format packets in a payload of said second-format packet based, at least in part, on said selected compression process; and

means for omitting redundant common addressing data from said payload of said second-format packet.

42.   (previously presented) The apparatus of claim 41, wherein said first format comprises a fixed-length packet format and said second-format packet is formatted according to a variable length packet format.

43.   (previously presented) The apparatus of claim 41, wherein said plurality of first-format packets comprise ATM cells.

44.   (previously presented) The apparatus of claim 43, wherein said ATM cells comprise an ATM trailer, said ATM trailer comprises a payload comprising user data and overhead padding bytes, and further comprising:

means for including said user data in said payload of said second-format packet; and

means for omitting at least a portion of said padding from said payload of said second-format packet.

45.   (previously presented) The apparatus of claim 43, and further comprising means for omitting from said payload of said second-format packet one or more of padding, CPCS bytes and/or SSCS bytes of an ATM trailer cell among said received packets.

46.   (previously presented) The apparatus of claim 43, and further comprising:

means for omitting from said payload of said second-format packet padding of an ATM trailer cell among said received packets; and

means for including in said payload of said second-format packet a padding pattern byte representative of said omitted packet padding

47.   (previously presented) The apparatus of claim 41, wherein said second-format packet comprises a MAC packet, and further comprising means for deriving a MAC header for said MAC packet based, at least in part, on said common header addressing data.

48.   (currently amended) The apparatus of claim 41, and further comprising[[:]]

means for receiving a request for a communication channel connection[[;]] , and wherein said means for selecting a compression process from among a plurality of compression processes further comprises means for selecting said compression process upon grant of said received request; and

~~means for performing said mapping and said combining based, at least in part, upon said selected compression process.~~

49.   (previously presented) The apparatus of claim 41, and further comprising means for including at least a portion of said common addressing data in said payload of said second-format packet.

50.   (previously presented) The apparatus of claim 41, wherein said first-format packets comprise a first-format packet header, and further comprising:

means for mapping said first-format packet header to a header of said second-format packet; and

means for omitting said first-format packet header from said payload of said second-format packet.

51.   (previously presented) The apparatus of claim 41, and further comprising

means for receiving at least some non-common addressing data in said received first-format packets; and

means for encapsulating at least a portion of said non-common addressing data in said payload of said second-format packet.

52.   (previously presented) The apparatus of claim 41, and further comprising means for disposing a portion of first-format header addressing data common to said incoming packets in a single field of said second-format packet.

53.   (previously presented) The apparatus of claim 41, and further comprising:

means for receiving at one of more directional antennas signals transmitted from one or more subscribers;

means for decoding said received signals into received data having said second-packet format; and

means for reformatting said received data having said second-packet format into data having said first-packet format.

54.   (Currently Amended) ~~The apparatus of claim 41, wherein said plurality of first-format packets constitute at least a portion of a packet block transfer over a communication channel, and further~~ An apparatus comprising:

means for receiving data in a plurality of first-format packets of at least a portion of a packet block transfer over a communication channel comprising common header addressing data and formatted according to a first format, the first format being a fixed length format;

means for determining whether said communication channel is provisioned for virtual path switching or virtual connection switching for transmission of said block transfer;

means for combining payload data of said first-format packets in a payload of a second-format packet;

means for mapping all header data from one of said first-format packet headers into a header portion of said second-format packet, adding appending data reflective of user data in said first-format packets to said payload of said second-format packet, and omitting all first-format header data from the payload of the second-format packet if said communication channel is provisioned for virtual connection switching; and

means for mapping a portion of header data from one of said first-format packet headers into a header of said second-format packet, omitting said mapped portion of header data from other portions of said second-format packet, and placing data reflecting remaining first-format header data along with payload data from at least some of said incoming packets into said payload second of said second-format packet if said communication channel is provisioned for virtual path switching.

55.   (currently amended) A system comprising:

one or more base stations comprising:

a segmentation module adapted to buffer data received in a plurality of first-format packets comprising common header addressing data and formatted according to a first format, said first format being a fixed length format;

a MAC module adapted to:

determine a compression process from among a plurality of compression processes;

map at least some of said common addressing data to one of more fields of a second-format packet based, at least in part, on said determined compression process;

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combine payload data of said first-format packets in a payload of said second-format packet based, at least in part, on said determined compression process; and

omit redundant common addressing data from said payload of said second-format packet; and

a radio frequency transmitter to transmit said second-format packet encoded in a radio frequency signal; and

one or more customer premises equipment (CPE) stations comprising:

a radio frequency receiver to receive the radio frequency signal; and

a decoder to decode at least a portion of said second-format packet based, at least in part, on said received radio frequency signal.

56. (previously presented) The system of claim 55, the system further comprising a back-haul connection coupled to the one or more base stations to provide one or more of the CPE stations with access to an Internet service.

57. (previously presented) The system of claim 55, wherein the system further comprises a video server capable of providing a video service to at least one of said CPE stations.

58. (previously presented) The system of claim 55, wherein the system further comprises at least one residential gateway coupled to one of said CPE stations.

59. (previously presented) The system of claim 58, wherein the system further comprises at least one ATM switch coupled to segmentation module to provide at least one ATM service to one or more of the CPE stations.

60. (previously presented) The system of claim 59, wherein the ATM switch is capable of providing at least one of a video service, a voice service and/or a data service to said one or more of the CPE stations.

61.   (previously presented) The system of claim 55, wherein said system further comprises a sectored active antenna array coupled to said radio frequency transmitter.

62.   (cancelled).

63.   (previously presented) The system of claim 55, wherein said plurality of first-format packets comprise ATM cells.

64.   (previously presented) The system of claim 63, wherein said ATM cells comprise an ATM trailer, said ATM trailer comprises a payload comprising user data and overhead padding bytes, and wherein said MAC module is further adapted to:
      include said user data in said payload of said second-format packet; and
      omit at least a portion of said padding from said payload of said second-format packet.

65.   (previously presented) The system of claim 63, wherein said MAC module is further adapted to omit from said payload of said second-format packet one or more of padding, CPCS bytes and/or SSCS bytes of an ATM trailer cell among said received packets.

66.   (currently amended) The system of claim 63, wherein said MAC module is further adapted to:
      omit from said payload of said second-format packet padding of an ATM trailer cell among said received packets; and
      include in said payload of said second-format packet a padding pattern byte representative of said omitted packet padding.

67.   (previously presented) The system of claim 55, wherein said second-format packet comprises a MAC packet, and wherein said MAC module is further adapted to derive a MAC header for said MAC packet based, at least in part, on said common header addressing data.

68.   (previously presented) The system of claim 55, wherein said MAC module is further adapted to include at least a portion of said common addressing data in said payload of said second-format packet.

69.   (previously presented) The system of claim 55, wherein said first-format packets comprise a first-format packet header, and wherein said MAC module is further adapted to:

map said first-format packet header to a header of said second-format packet; and

omit said first-format packet header from said payload of said second-format packet.

70.   (previously presented) The system of claim 55, wherein said first-format packets at least some non-common addressing data, and wherein said MAC module is further adapted to encapsulate at least a portion of said non-common addressing data in said payload of said second-format packet.

71.   (previously presented) The system of claim 55, wherein said MAC module is further adapted to dispose a portion of first-format header addressing data common to said incoming packets in a single field of said second-format packet.

72.   (currently amended) ~~The system of claim 55, wherein said plurality of first-format packets constitute at least a portion of a packet block transfer over a communication channel, and wherein said MAC module is further adapted to:~~

A system comprising:

one or more base stations comprising:

a segmentation module adapted to buffer data received in a packet block transfer over a communication channel, said packet block transfer comprising a plurality of first-format packets comprising common header addressing data and formatted according to a first format, said first format being a fixed length format;

a MAC module adapted to:

map ~~all~~ a portion of header data from one of said first-format packet headers into a header portion of said second-format packet, include data

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reflective of user data in said first-format packets to said payload of said second-format packet, and omit all first-format header data from the payload of the second-format packet if said communication channel is provisioned for virtual connection switching; and

map a portion of header data from one of said first-format packet headers into a header of said second-format packet, omit said mapped portion of header data from other portions of said second-format packet, and place data reflecting remaining first-format header data along with payload data from at least some of said incoming packets into said payload second of said second-format packet if said communication channel is provisioned for virtual path switching; and

a radio frequency transmitter to transmit said second-format packet encoded in a radio frequency signal; and

one or more customer premises equipment (CPE) stations comprising:

a radio frequency receiver to receive the radio frequency signal; and

a decoder to decode at least a portion of said second-format packet based, at least in part, on said received radio frequency signal.